Amendments to the Claims:

Cancel claims 1-18 and rewrite their subject matter as follows:

19. (New) In the process of sulfur oxide sorption from a gas containing at least one sulfur oxide, wherein said gas is contacted, at an elevated process temperature, with a solid sorbent material under conditions sufficient to remove sulfur oxide from the gas, the improvement that comprises:

effectively contacting said gas with a solid crystalline sorbent material comprising at least one crystalline material comprising layers of brucite structure comprising about 10 to 30 weight percent magnesia under conditions adapted for the absorption of sulfur oxide from said gas; and

where said sorbent material comprises a chlorite layered structure, said chlorite has been subjected to conditions under which:

a sulfur oxide is absorbed from a gas containing sulfur oxide onto said chlorite layered structure; and

sulfur values have been desorbed from said chlorite prior to the instant sorption of sulfur oxide from said gas.

20. (New) The improved process of sulfur oxide absorption claimed in claim 19, wherein the amount of sulfur oxide removed from said gas in a second absorption step is greater than the amount of sulfur values absorbed from said gas in a first absorption step.

21. (New) The improved process of sulfur oxide absorption according to Claim 19 wherein said absorbent comprises a hydrotalcite.

22. (New) The improved process of sulfur oxide absorption according to Claim 19 wherein said solid crystalline sorbent material has deposited thereon an effective amount of oxidative catalyst comprising at least one metal.

24. (New) The improved process of sulfur oxide absorption according to Claim 23 wherein said solid crystalline sorbent material comprises at least one of cerium oxide and vanadium pentoxide.

25. (New) The improved process of sulfur oxide absorption according to Claim 23 wherein said phyllosilicate consists essentially of amesite.

26. (New) The improved process of sulfur oxide absorption according to Claim 19 wherein said solid crystalline sorbent material consists essentially of at least one chlorite and at least one hydrotalcite collectively containing about 14 to 29 wt% magnesia.

27. (New) In the process of cracking a heavy hydrocarbon feed stock containing sulfur compounds, at a process temperature in the range of about 700° to 820°C and in the presence of a cracking catalyst, to produce a product comprising a gas phase containing at least one sulfur oxide;

contacting at least a portion of said gas phase under said process conditions with a sufficient quantity of a solid, comprising at least one sulfur oxide absorbent material, to absorb sulfur oxide from said gas;

the improvement comprising:

contacting said gas with a sulfur oxide absorbent material comprising at least one magnesia-rich layered phyllosilicate having alternating silicate and brucite layers in a first pass;

desorbing sulfur values from said absorbent material; and

in a second pass, recycling said desorbed phyllosilicate layered absorbent material in combination with hydrotalcite into effective absorption contact with additional quantities of said sulfur oxide containing gas whereby absorbing more sulfur oxide from said gas in said second pass than in said first pass.

28. (New) The process according to Claim 27 wherein said phyllosilicate contains about 10-30 weight percent magnesium oxide.

29. (New) The process of Claim 27 wherein said phyllosilicate consists essentially of amesite.

30. (New) The process of Claim 27 wherein said solid sorbent material contains hydrotalcite comprising a predominant proportion-of magnesia.

31. (New) A process for sulfur oxide abatement comprising:

contacting a gas containing sulfur oxide at an elevated process temperature, that is sufficient to enable sulfur oxides to be adsorbed from said gas, with a sufficient amount of solid sorbent material to remove sulfur oxide from the gas;

wherein said solid sorbent material comprises at least one layered phyllosilicate having alternating silicate and brucite layers and containing about 10-30 weight percent magnesium oxide.

32. (New) The process of Claim 31 for sulfur oxide abatement wherein the gas includes a vapor phase derived from a process comprising oxidative regeneration of deactivated cracking catalyst; comprising:

forming sulfur dioxide during said oxidative regeneration,

converting said sulfur dioxide to sulfur trioxide by contacting said gas at elevated temperature with solid material, having sulfur oxide sorption ability, and having an oxidation catalysis comprising at least one metal disposed thereon that is adapted to catalyze the conversion of said sulfur dioxide to sulfur trioxide.

33. (New) The process of Claim 32 for sulfur oxide abatement wherein the solid sorbent is regenerated by desorbing sulfur values therefrom and recycled, thereby the amount of sulfur oxide absorbed in said recycle operation is increased as compared to the amount of sulfur oxide absorbed in a first pass of said gas in contact with said solid sorbent/catalyst.

34. (New) A sorbent composition comprising a mixture of about 10 to 90 parts by weight of magnesia-rich chlorite containing about 10-30 weight percent MgO; and 10 to 90 parts by weight of hydrotalcite containing at least about 50 weight percent MgO; wherein at least said

chlorite has previously been subjected to absorption of sulfur oxides from a gas and to desorption of absorbed sulfur oxides from said chlorite.

35. (New) In the process of sulfur oxide sorption wherein a gas containing sulfur oxide is contacted at elevated process temperature with a solid sorbent material to remove sulfur oxide from the gas, the improvement which comprises:

contacting said solid sorbent material, comprising at least one magnesia-rich crystalline material having a layered structure comprising layers of brucite, wherein the brucite containing absorbent material is predominately magnesia, with said gas under absorption conditions;

subjecting said solid sorbent material to desorption of sulfur values; and

recycling said desorbed solid sorbent material to further absorption of sulfur oxides from said gas.

36. (New) The process of Claim 35 wherein the sorbent composition comprises a mixture of magnesia-rich chlorite and hydrotalcite in a weight ratio of about 10:90 to 90:10 chlorite: hydrotalcite.